

## **The Observed Eigenfrequency of the Chandler Wobble**

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In the absence of excitation, the amplitude of the Chandler wobble would freely decay due to dissipation. Mantle anelasticity is one possible dissipation process of the Chandler wobble and is also responsible for the decay of both seismic waves and the Earth's normal modes. Assuming that a single absorption band extends from the Chandler frequency to seismic frequencies, then the observed values for the period and quality factor  $Q$  of the Chandler wobble can be used to estimate the frequency dependence of the dissipation. In the past, estimating the period and  $Q$  of the Chandler wobble has been hampered by not knowing its excitation mechanism(s). However, it has been recently demonstrated that the Chandler wobble is excited by a combination of atmospheric and oceanic processes, with ocean-bottom pressure fluctuations being the dominant excitation mechanism. Here, products of atmospheric and oceanic general circulation models are used to model the excitation of the Chandler wobble when estimating its period and  $Q$ . Implications for mantle anelasticity of this newly determined value for the eigenfrequency of the Chandler wobble are discussed.